

Programming the Amiga



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AMIGA USERS GROUP INC.

P.O. Box 684E Melbourne 3001, Victoria Australia.

Who Are WE?

The Amiga Users Group is a not-for-profit association of people interested in the Amiga computer and related topics. We DO NOT condone software piracy. We can be reached via an answering machine at: **527 1995**

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Membership of the Amiga Users Group is available for an annual fee of \$30. Membership forms are available from AUG and in this Journal. Send completed form with a cheque or money order for \$30 to the address above.

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CLUB EVENTS

For details of club events and meeting dates, check inside the back cover and the A.U.G. calendar on page 20.

An entry fee is charged by the groups to cover the cost of hall rental and light refreshments. Meeting times and directions are listed in the rear of the Journal.

Back Issues of Workbench

All back issues of Amiga Workbench are now available, for \$2 each including postage. Back issues are also available at meetings.

Workbench Contributions

Articles, papers, letters, drawings, cartoons and comments are actively sought for publication. Contributions may be sent in on disk, paper or uploaded to Amiga Central in the area set aside for this purpose. Please send your contribution in text-only, non-formatted if they are on file and remember to include your address for return of disks. Deadline for articles is the first week of the month preceding Publication. Contributions can be sent to: The Editor, AUG, PO Box 684E, Melbourne 3001.

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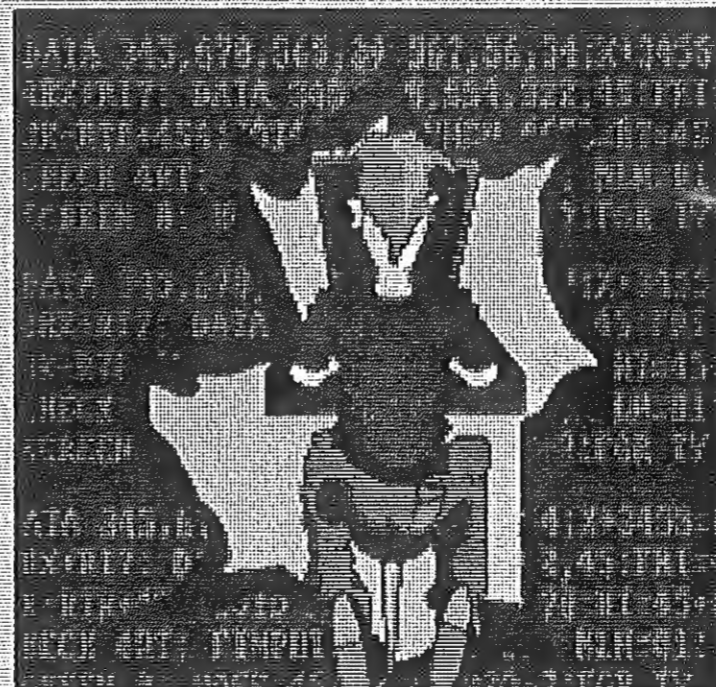
Here is a list of AUG members who have volunteered to share their knowledge/experiences with others. If you want to help and have your name listed here please contact the Editor. They are not listed in any order or priority. Please **keep contacts to reasonable hours** (6 - 9 pm unless otherwise noted) and remember the basis of this service - they are volunteers.

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Cover illustration by Nathan Mitchell

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Retrospective

Some of you may be aware, this is the one year anniversary of the Workbench magazine in its present format. This being the case I decided to have a quick look at the editorial comment of October 1991. The comments made are as valid now as they were then. In particular I would like to restate the request that submissions be supplied with the author's name and a contact number.

You may have noticed that the biographies are getting a little scarce. This is because as a relatively new member I don't know most of the people in the group and therefore have no idea what they do with their time.

Most people would have realised this issue of Amiga Workbench has a distinct Programming flavor, as evidenced by our front cover illustration and articles on a variety of the different Amiga programming languages. Included are articles on Amos, Basic, DOS and Forth, a language I believe has not previously been mentioned in this magazine.

There will doubtless be people who are happy with this bias and those that are not. Since the magazine is put together with the material available this bias is due mainly to the efforts of our several writers. In other words if you want to change the bias feel free to write.

On another subject, those of you who went to the recent SEAUG and AUG meetings would have had the chance to see Opalvision in action. It is good to see an Australian designed product and software (Opalpaint) of the standard shown. The down side to the product is the fact that it's being manufactured in the USA. Not solely because it means another product not being manufactured locally but also as it means the price will be subject to currency variations. Anyone who has kept their eye on the Australian dollar will know what that means. Hopefully (hint) someone will come forward and supply a product review on Opalvision so as the people who didn't see it at either meeting can get a perspective of the device. (PS Arnie, there's a free slot on my A3000)

Eric

Going Forth

by Derek Parnell

THIS IS THE FIRST article in a series about Forth and its use on the Amiga. The articles will usually be in two parts, the first dealing with Forth as a language and the second looking at how the Amiga can be programmed with Forth.

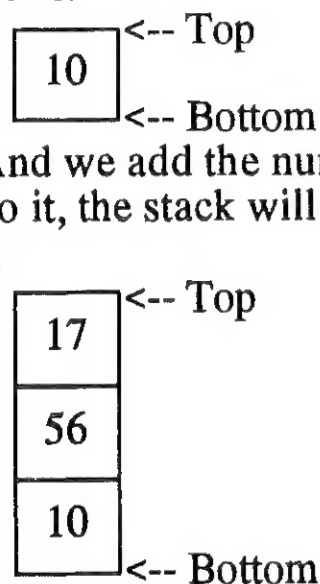
Introduction to Forth

If you haven't seen Forth before, it can seem pretty weird. There are two main concepts that form the key to understanding Forth, the stack and the dictionary. Get these tucked firmly under your belt and the remainder follows. Well almost, there are one or two tricky bits that tend to induce headaches, but we'll get to those later.

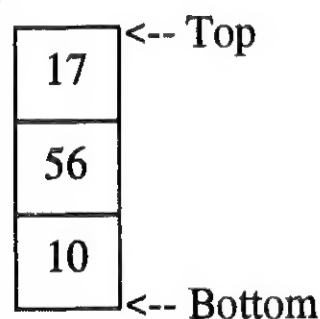
The Stack

The Forth stack (actually there are two stacks, once again more later) is based on the analogy of a physical stack of objects. Imagine a pile of plates. You can add to the pile (stack) but only by putting new plates on top of any existing ones. You can remove plates but only by taking them from the top. Forth does this with numbers in RAM (internal computer memory).

Note that in computers, all things are really numbers, even if we think of them as characters, text, pictures or sound samples. If the stack looks like this.



And we add the numbers 56 then 17 to it, the stack will then look like this.



Now is a good time to show the conventional way of describing the stack contents. The above examples are fine but they take up a lot of room. I'll adopt the common way of

showing the stack contents from now on. The stack is simply shown as a line with the rightmost number representing the top of the stack. Our examples above would be shown as.

```

10
then add 56 then 17 giving
10 56 17

```

These stack diagrams will become more important when we describe the various effects on the stack as a Forth program executes.

"Forth is the epitome of style and freedom of expression."

"Forth is utter gibberish. A self-evident backward step for civilization."

Welcome. The above two expressions, in various guises are often voiced about Forth usually by the same person within minutes of each other. I can personally vouch for this, but for some reason I persist with the language I love and hate.

The Dictionary

A dictionary is where words are defined. That is probably no surprise but in Forth the "word" is a fundamental concept. A Forth "word" is a named object that does something. Just about everything in Forth is either a word or a number. In fact a Forth program is just a collection of "words".

When you first start up Forth there is a built-in dictionary containing the basic system. You create your program by adding your own words to the dictionary.

Some commonly used built-in words are those for doing arithmetic. These include:

+ - * / MOD

Notice that Forth's definition of what constitutes a word is a little different from English. A Forth word is ANY set of characters that doesn't contain a blank. Thus the plus symbol is a word, as are these three combinations:

** >R

Back to our arithmetic. Each of the five words + - * / MOD takes two numbers, does something with them and produces a resultant number. These five Forth words take the top two numbers from the stack and return the result to the stack.

There is a standard used by Forth programmers to help document the stack behaviour of a word. For example (n1 n2 -- n3). This reads as take the top two numbers from the stack and place a third number back. It does not, and is not meant to describe what happens to the two numbers taken from the stack.

Given the numbers 5, 6 and 2, in that order on top of the stack, the five arithmetic words above do the following:

Word	Description	Before	After
-	Subtract 2 from 6	5 6 2	5 4
*	Multiply 2 by 6	5 6 2	5 12
/	Divide 6 by 2	5 6 2	5 3
MOD	Give the remainder of 6 / 2	5 6 2	5 0

Some other common built-in words that manipulate the stack contents are:

Word	Description	Before	After
SWAP	Swap the top two numbers	5 6 2	5 2 6
DUP	Duplicate the top entry	5 6 2	5 6 2 2
ROT	Take the third number from the stack and place it on the top	5 6 2	6 2 5
OVER	Copy the second number and put it on the top	5 6 2	5 6 2 6
DROP	Remove the top entry	5 6 2	5 6

Now let's look at how you would write a Forth program. To add 6 and 2 together we write

To understand why it seems to be written the "wrong" way around we need to look to the inner workings of the Forth interpreter. That's the part of Forth that converts program text into a working program.

Forth examines the input text for the next word. It then searches the dictionary for that word and if it is found it is executed (it lets the word do what ever it was designed to do). If however, the word is not in the dictionary it tries to convert it into a number. If possible it places the number on the stack, otherwise it issues an error message.

In the program above the word "6" is picked out and searched for in the dictionary. When it isn't found it's converted from the text "6" to the number 6 and put on the stack. This is repeated for the word "2". The word "+" however is in the dictionary so Forth executes it causing 6 to be added to 2.

Now a harder example.

5 7 4 3 + * swap over over mod rot rot /

The result is 4 3
Okay, let's take this one slowly.

Stack	Word	Description
	5	'5' is put on the stack.
5	7	'7' is put on the stack
5 7	4	'4' is put on the stack
5 7 4	3	'3' is put on the stack
5 7 4 3	+	'+' multiplies 4 by 3 giving 12.
5 7 12	*	'*' adds 7 and 12 giving 19.
5 19	swap	'swap' swaps 5 and 19
19 5	over	'over' copies 19 to stack top.
19 5 19	over	'over' copies 5 to stack top.
19 5 9 5	mod	'mod' gives the remainder 19 / 5.
19 5 4	rot	'rot' takes the 19 to the stack top.
5 4 19	rot	'rot' takes the 5 to the stack top.
4 19 5	/	'/' divides 5 into 19 giving 3.
4 3		

Another two words that you will use often are

. .

Yes that's a dot and a dot-quote. The . word takes the top number from the stack and displays it as a number. The other word displays all the characters up to the next quote.

So the line

3 5 dup . ." multiplied by " over . ." *
will result in

5 multiplied by 3 = 15 ok

being displayed on the screen. Notice the "ok"? This is Forth's way of letting you know that the previous set of commands ran okay. Also notice the blank after the dot-quote. This blank marks the end of the dot-quote word and is not displayed. In fact if you omit it the next word after the . will be ."multiplied which of course is not in the dictionary! ■

Due to a shortage of space in this issue, the second half of this article will appear in the next months edition of Workbench. As a result the next article from Derek Parnell will be printed in a subsequent issue.

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Getting to know AmigaDOS

by Jeff Kirkland

IN THIS second article on AmigaDOS Jeff takes you further into the intricacies of directory related commands. By the time you have read and digested all of his articles you should find using the Amiga more fun and productive than before.

Part 2

Last time we had a quick look at the DIR command. This time let's take a look at a couple of the other related commands.

Firstly some more background information. AmigaDOS allows you to create directories on a disk. Directories allow you to group related files together so that they are easier to find when you need them. When you format a disk it has only one directory, known as the ROOT DIRECTORY. From the root directory more sub-directories can be added. For example, on a blank disk you might create a directory called ART. You then decide that within the ART directory you will have two sub-directories, one for colour pictures and one for black and white pictures. The directory could look something like this:

```
ROOT DIR (DF1:)
|
ART
|
COLOUR - B&W
```

This type of structure is called a directory tree.

As we've seen we can get the contents of a directory by specifying its path name e.g.

```
DIR DF1:ART/COLOUR
```

If we wanted to do more than just look in that directory it is more convenient to change to the directory we want to work with. This eliminates the need to specify the path name with each command. The command we need to do this is CD (Change Directory). To move from one directory to another simply type

```
CD pathname<CR>
```

To change into the COLOUR directory in our example (assuming it's in drive DF1:) type CD DF1:ART/COLOUR. You would now be in the COLOUR directory and typing

```
DIR<CR>
would list its contents.
```

There are one or two path shortcuts that are worth remembering as they can save some typing when changing from one directory to another. The first one is '.'. This is shorthand for the root directory. If you were to type

```
DIR:<CR>
```

you would get a listing of the files in the root directory. Similarly

```
CD:<CR>
```

will take you straight back to the root directory of your current disk.

The other useful shortcut is '/'. You can use this to move back one level on the directory tree. If we are in the COLOUR directory, typing

```
CD /<CR>
```

will put us in the ART directory. Typing

```
CD /B&W
```

would move us back one level to the ART directory and then move us back down into the B&W directory. It is also possible to use multiple '/'s e.g.

```
CD //
```

would move us back up two levels in the directory tree.

One last hint for directories with two or more words in their names. Giving a directory a name like 'JEFF'S ART' is ok and AmigaDOS will allow it but you should remember that in CLI, spaces separate commands. The CLI would interpret

```
CD JEFF'S ART
```

as a CD command followed by two parameters. As CD can only have one parameter (the pathname) you will get an error message. The way to avoid this is to enclose the entire command in quotes. Typing

```
"CD JEFF'S ART"
```

will produce the desired result. It's a good idea make all your directories and filenames one word such as Jeff'sArt or Jeff's_Art.

There is also an alternative to the DIR command that is pretty useful at times. The LIST command is similar to DIR but has many more options and shows much more information about the files. Typing

```
LIST<CR>
```

from the root directory in our example would display

```
ART Dir ----rwed 20-Sep-92
11:32:12
```

```
ART.info 628 ----rw-d 20-Sep-92
11:32:14
```

What does it all mean? The first column shows us the file name. Next is either 'Dir' if it's a drawer or the size of the file in bytes if it isn't. The next column shows us the file protection bits. We'll take a good look at protection bits when we get to the PROTECT command. For now though the 'rwed' part tells us that the file is Readable, Writeable, Executable and Deletable. A '-' means that the flag is turned off. E.g. ----rwe- means that we can read, write and execute the file but it can't be deleted. The next two columns tell us the date and time that the file was last changed.

LIST has too many options to cover in the remainder of this article but here are a few to play with between now and the next issue.

```
LIST QUICK<CR>
LIST NODATES<CR>
LIST FILES SINCE YESTERDAY<CR>
```

Try them out to see what they do!

Next month we'll LIST our options, take the ASSIGNment and assume an ALIAS in a further attempt to uncover the mysteries of AmigaDOS. See you then.

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New Kid on the Block

OZAmiga magazine

review by Rob Pemberton

IF YOU HAD'NT noticed lately there have been some interesting changes in your local newsagent's computer rack. Especially in the Amiga section.

It's true that the publishing scene in the U.S. is relatively depressing for an Amiga reader with general interests, the latest casualty would appear to be the eccentric ".info" magazine whose last issue was dated April this year. Europe however is still humming along with new games mags and general interest titles popping up with increasing regularity.

Australia has recently lost the Professional Amiga User monthly (from Sydney publisher Gareth Powell) but I'm pleased to announce a new arrival and a local one at that!

If you haven't noticed, a plastic bagged magazine called OZAmiga has quietly snuck onto the racks. For those interested the bag protects

a free coverdisk, no salacious pictures for adults only!

OZAmiga is published monthly in West Australia, a state where the Amiga has always been strongly supported. It is currently in its third edition. For a cost of \$6.95 you get a 40-page colour mag with coverdisk that measures up pretty well against its English counterparts. Magazines that retail at prices up to \$15.00.

In case you can't read through plastic, here's a rundown of September's issue:

The enclosed coverdisk contains a crunched arcade-quality SEU game "Magnatr on" plus a short AMOS game preview "Octopus", the latest version of John Veldhuis's excellent Virus Checker V6.15 and a great DPaint IV tutorial from Graphic Palette's's editor Dennis Nicholson explaining the mysteries of the MOVE option. This animation

should be viewed in conjunction with the corresponding magazine article written by Dennis.

In addition there are useful reviews of the Final Copy word processor, Scala MM200 multimedia, Workbench 2.1, the latest version of the Australian software masterpiece Directory Opus and articles on C and assembly language programming. There's more. Game reviews, puzzles, hardware previews etc.

The eight gentlemen whose photos are featured on page 2 (why is this such a gender specific hobby?) and claim editorial responsibility for OzAmiga deserve many plaudits and sales to fight the good fight and spread the word.

If your newsagent doesn't stock OZAmiga - contact Triple "D" Publications, Box 381, Wanneroo, WA 6065. ■

what's in issue 3 ?

Interaction

a regular rundown of Australian Amiga User groups (about time!)

BAUDroom

BBS column checks Skyline V1.32 software.

First Aid

examines Hard Drive/ROM 2.xx incompatibilities.

Thru The Domain

looks at Aussie public domain software.

Hardware Hacks

disabling your A2000 auto-boot hard disk controller.

AMOS

continuing series explaining the AMOS command set.

ArcAID

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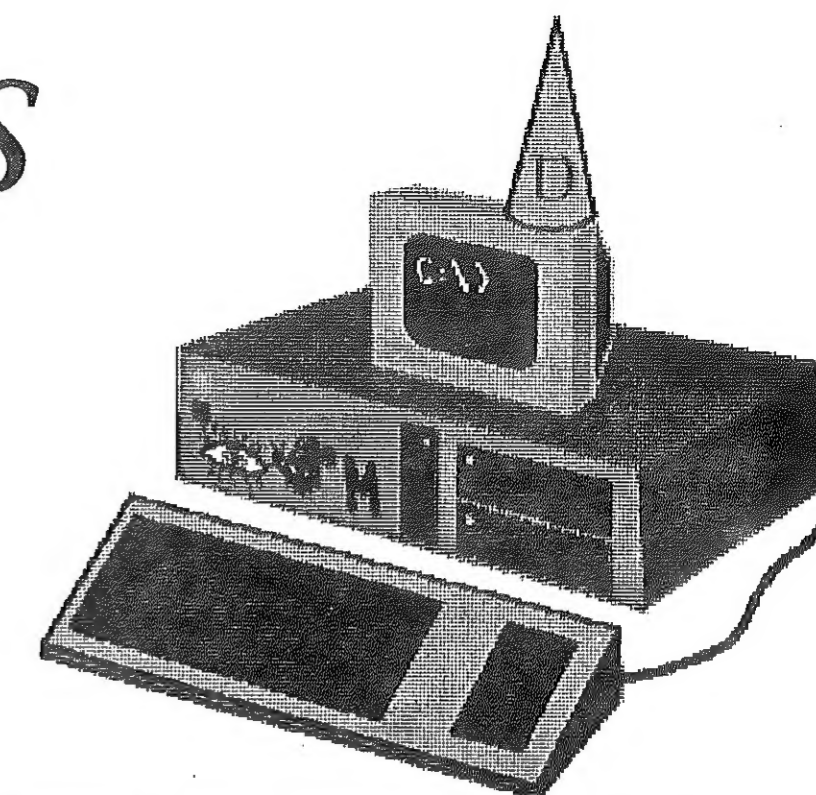
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The MS-DROSS user dictionary

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Amiga productivity



AT	A computer that's unsure where it's at.	Low Density Drive	Intelligent storage device. See High Density Drive.
Baud Rate	How quickly one gets bored when telecommunicating.	Microsoft	What happens to software when it's cooked in a microwave.
Compaq	The U.S. spelling of compact.	MODEM	Sylvester Stallone expression, as in "Arm gonna MODEM bastards down wid ma M-16".
CPU	The awful smell at Bondi beach.	Monochrome Display	Riding a Harley Davidson with one wheel in the air.
DBase	To lower in quality, character or value.	MS-DOS	Acronym for Maybe Someday, a Decent Operating System.
Digital DIR	Your fingers.	Motherboard	The Mother that makes the sucker work.
Epson	An expression of annoyance at someone who states the obvious. Such as "Oh, DIR! As if i didn't know that."	NEC O/S2	The Japanese spelling of neck. A size like XOS. Too large to fit. Leaves many loose ends and gaps.
F1 Key	An assault that creates stomach upsets.	PC	Very small. Insignificant. As in "What a PC little mouse pad."
F3 Key	A Help key that one needs help to find.	Postscript	The small type at the back of your printer manual that says how much new toner cartridges cost.
Floppy Disk	A magnetic disk in a small, hard case. See Hard Disk.	Processor	Device that mashes everything put into it into an unrecognisable pulp for human consumption.
486	Three numbers divisible by two.	/P	Slash, P or going to the toilet.
Function Keys	The keys at the top of a keyboard, that often have no function.	Screen Resolution	Deciding which monitor to buy.
Hard Disk	A magnetic disk in a large, floppy case. See Floppy Disk.	SCSI	Italian for excuse me.
Help Key	Something missing from IBM-PC	386	Bored out motor for a 1967 Holden sedan.
Hidden File	A file that MS-DOS tells you is hidden, but not where, just to give you the shits.	Turbo	A turbine that boosts exhaust gases above atmospheric pressure, for induction into the inlet manifold. Makes a PC spin-out and lose control.
High Density Drive	Really stupid storage device. See Low Density Drive.	VGA monitor	A large, predatory lizard of Very Garish Appearance.
HiRes	Very tall Housing Commission flats.	Voice Mail	When people read your private letters out loud.
HP Compatible	A chop that tastes good with this famous sauce.	Windows	Something that jams when open, lets in bugs and should be shut down permanently before it's curtains for your computer.
IBM Clone	A computer, developed in a test tube, that should be left in one.	Workstation	Not applicable to Vic Rail.
Ink Jet	An airline that looks good on paper, but never gets off the ground.		
LAN	Very tasty for carnivores. See HP compatible.		
LoRes	How one feels on Monday morning.		
Lotus 123	A very uncomfortable position.		

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Basic Firepower

Zones and GFA Basic

by David Fong

FOR ALL OF GFA BASIC's programming power, Amos comes out top when it comes to designing user interfaces. Just a few commands set up 'screen zones' which can be used as gadgets or sprite collision areas. Workbench 2.0 provides nice looking standard gadgets, but until then..

Below I have written a few procedures allowing the establishment of screen zones (for use as gadgets) in GFA Basic. 'Establish_zones' must be called before using any zone routines. 'Zone' is used to print out a string and automatically define a zone around it. 'Mouse_zone' returns the location of the mouse cursor, in terms of defined zones. A few other routines allow alternative definition of zones.

I had written these procedures when converting an Amos program to GFA Basic. This is because I purchased my copy of GFA Basic with a compiler, whereas I have not yet forked out \$70 for the Amos compiler! GFA Basic also benefits from a good turn of speed and provides standard Amiga windows and multitasking features.

To my surprise I had some trouble with the GFA compiler (version 3.5E). Programs that would run on the interpreter would not run on the

compiler, sometimes crashing or producing the wrong results. I had previously written two fairly large GFA Basic programs (a strategy game and a Kermit terminal) and had no problems with compilation. Using the 'Dis' disassembler on Fish disk 240, the compiled GFA Basic program apparently used long integer (4 byte) addition and subtraction, even when the variables were words (2 bytes long). To me,

that seems to be inviting trouble! Problems persisted even when I had converted all integers to long integers. These problems included:

- Crashing when trying to set a word (two-byte integer) array variable to 'TRUE'
- Failing to terminate a FOR - NEXT loop, resulting in a crash.
- Erroneous addition and subtraction of word (two-byte integer) variables.

Some tips for GFA Basic users.

i. Don't use the GFA Basic editor when initially developing a program. The editor has a nasty habit of crashing eventually, so use a text editor to write the program, and then use the GFA editor only during debugging.

ii. The 'EXEC' command requires the 'Run' command to be in the C: directory. This is only of interest to avid AmigaDos Replacement Project (ARP) users who have gotten rid of the 'Run' command. ■

David is a medical student and regular contributor to Workbench with his articles on programming.

LANGUAGE	TIME
Basic 2.0 (C64)	5:04
AmigaBASIC (Amiga)	1:32
DICE C (PD Amiga)	0:33
Assembler (C64)	0:26
GFA Basic 3.5 (interpreter)	0:21
AMOS (interpreter)	0:20
Cursor 1.1 Basic (PD Amiga)	0:06
GFA Basic 3.5 (compiled)	0:03

Just for interest, above is a comparison of language speeds. The benchmark is a Sieve program published in the March 1987 edition of the 'Transactor'. The algorithm finds the first 1000 primes, and does not use the 'blotto' method found in most sieve algorithms. Instead, the program remembers all primes already found in a 1000 element array. The benchmarks were executed on my 7 MHz Amiga 500. I have included the Transactor's Commodore 64 timings for comparison!

The very short timings could represent less raw computing power than how long a language requires to set everything up. Somehow, I don't think interpreted BASICs can really outpace Commodore 64 assembler, even though the Commodore 64 is a 1 MHz machine! Another, more conventional, sieve program I have tried has the C compilers (including DICE) working much faster than all the BASICs. Well, you know what they say about statistics...

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```
PROCEDURE establish_zones
maxzone%=20      ! adjust for taste!
DIM zone%(maxzone%,1,3)
' zone%(n%,a%,b%)
' n% - number of zone
' a% - 0 - first co-ord
'      1 - second co-ord
' b% - 0 - window ! not used in this version
'      1 - x coord
'      2 - y coord
'      3 - TRUE/FALSE active zone, a%=0
' TRUE/FALSE not used in this version
' generally not necessary, and doesn't
' work with version 3.5D of the compiler!
RETURN
```

```
PROCEDURE set_topleft_zone(w%,n%)
' w% - window
' n% - number of zone
' set top left of zone n% as current cursor '
position
LOCAL x%,y%
x%=CRSCOL      ! column and line position
y%=CRSLIN
zone%(n%,0,0)=w% ! window number, not used
' ! in this version
zone%(n%,0,1)=x%
zone%(n%,0,2)=y%
zone%(n%,0,3)=TRUE ! zone now active
RETURN
```

```
PROCEDURE set_bottomright_zone(w%,n%)
' w% - window
' n% - number of zone
' set bottomright of zone n% as current
' cursor position
LOCAL x%,y%
x%=CRSCOL      !column and line position
y%=CRSLIN
zone%(n%,1,0)=w%
zone%(n%,1,1)=x%
zone%(n%,1,2)=y%
RETURN
```

```
PROCEDURE close_zone(n%)
' close zone n%
zone%(n%,0,3)=FALSE !zone inactive
RETURN
```

```
PROCEDURE zone(a$,w%,n%)
' print string 'a$' as zone n%
' window number in w%
LOCAL i%,lx%,ly%,hx%,hy%
'
lx%=CRSCOL
hx%=lx%
ly%=CRSLIN
hy%=ly%
```

```
FOR i%=1 TO LEN(a$)
PRINT MID$(a$,i%,1);
IF CRSCOL<lx%
lx%=CRSCOL
ENDIF
IF CRSCOL>hx%
hx%=CRSCOL
ENDIF
IF CRSLIN<ly%
ly%=CRSLIN
ENDIF
IF CRSLIN>hy%
hy%=CRSLIN
ENDIF
NEXT i%
set_zone(w%,n%,lx%,ly%,hx%,hy%)
RETURN
```

```
PROCEDURE set_zone(w%,n%,lx%,ly%,hx%,hy%)
'used in procedure zone
' set zone n% to window w%
'topleft lx%,ly%      bottomright hx%,hy%
zone%(n%,0,0)=w%
zone%(n%,0,1)=lx%
zone%(n%,0,2)=ly%
' zone%(n%,0,3)=TRUE
zone%(n%,1,0)=w%
zone%(n%,1,1)=hx%
zone%(n%,1,2)=hy%
RETURN
```

```
FUNCTION mouse_zone
' returns position of mouse in terms of zones
LOCAL n%,i%,x%,y%,lx%,ly%,hx%,hy%
n%=1 !initially no zone selected
x%=MOUSEX !mouse position
y%=MOUSEY
i%=0
REPEAT
' search through all zones
' IF zone%(i%,0,3)=TRUE !if zone active the
' above line can be de-commented if using an
' interpreter
lx%=(zone%(i%,0,1)-1)*8 !calculate zone
' !limits - low x
hx%=(zone%(i%,1,1)-1)*8+8 !- high x
ly%=(zone%(i%,0,2)-1)*8 !- low y
hy%=(zone%(i%,1,2)-1)*8+8 !- high y
IF x%>=lx% AND x%<=hx% !if mouse in limits
IF y%>=ly% AND y%<=hy%
n%=i% !set to this zone
EXIT IF n%=i% !get out of loop
ENDIF
ENDIF
' ENDIF !this line can be de-commented if
' ! using an interpreter
INC i%
UNTIL i%>maxzone%
RETURN (n%)
ENDFUNC
```

Amiga Mail Elite

version 1.07

reviewed by Duncan Turner

AMIGAMAIL ELITE is a .QWK compatible mail reader for all Amiga models. It enables you to read, reply and write messages on any BBS that supports the .QWK message format. Written by Canadian Patrick Evens, the program is shareware. All that is required to register is \$10.

Upon unarchiving the program files, you must follow the instructions precisely or Amiga Mail Elite (AME) may have problems finding what it is looking for. It can be run from either floppy or hard disk. I had it running on my hard disk within minutes.

The next thing to do was download a message packet. I ring a number of BBSs that support the .QWK format so I rang one of these. It is important to remember you must have the same archive format as the one being used for AME (AME comes with unzip, which works fine).

Having received a message packet start up AME. You are given a small menu. Choose the option "read mail" to unpack your messages. Next choose the mail packet you want to read and AME unarchives it for you. Depending on what was included in the mail packet you may get a BBS screen and bulletins from the BBS the packet came from. After reading these, choose the option "Message Conferences". This will list the message areas you chose to download from the BBS.

Type in one of these and you are presented with the first message in that area. To move to the next area press the right arrow key on the Amiga's key pad, to move backwards press the left arrow key. To reply to a message press the star (*) key and your chosen editor pops up. The message you are replying to is quoted and you are free to do what you like with the reply, using your own editor. This is much easier than using a BBS editor on-line. Once you have finished your reply, save it and exit your editor.

AME then gives you the choice of inserting the message in your reply

packet or aborting the message. If you choose to insert it you are given a choice of tag-lines to place at the bottom of your message. These are contained in a text file and can be changed to your liking (A tag-line is a small comment placed at the bottom your message, usually a funny comment or something to tell the other readers where it comes from). You also have the choice to enter in your own messages, rather than replying to someone else's.

This is achieved in much the same way as replying to messages. When you have finished reading, writing and replying, return to the original menu where you chose to quit the packet. You are then given the choice of compressing the replies now or doing so later. If you choose to do it later you can come back another time and continue to read,

write or reply to any of the messages in that mail packet.

You compress the messages when you have finished with the mail packet. You can then upload it to the BBS when next you ring.

AME is one of the few Amiga .QWK readers. Currently .QWK isn't supported on Amiga run BBSs. However, for those people who ring IBM run BBSs and like to read and write lots of messages AME is a very handy tool.

AME still has room for improvement though. Movement through the messages is limited to the key pad and all disk activity is done in a CLI window on the workbench. This makes it hard to see what is happening when you are looking at AME's custom screen. Message quoting could be better also, as it doesn't write "On 3-09-92 Joe Bloggs wrote:" at the top of the message and only quotes the message with an "->" (Most BBS's quote the person's initials so that when you have multiple replies it is easier to see who said what). Apart from that AME runs well and serves its purpose as a .QWK mail reader for the avid BBS user.

Its main competition, Amiga Reader V2.00 is reportedly very buggy. I cannot comment on it though as I have not tried it. AME can be found on Amiga Central, Andy's Attic and Decadence under the file name "AMEV107.LHA". ■

What is .QWK?

The .QWK message format is used on IBM-based Bulletin Board Systems to enable modem users to read, write and reply to messages offline. This is handy for a number of reasons.

Firstly, it means that the person isn't connected to the BBS as long which keeps phone-lines free.

Secondly, it enables you to answer at normal computer speed in your own time, rather than at the modem speed (which can be very slow).

Thirdly, it enables you to read more messages than reading them online would normally allow.

Although it isn't running on any Amiga-run BBSs like AUG's Amiga Central the .QWK format is supported on IBM-run machines, many of which have Amiga areas. For example, here are some that support the .QWK message system:

Andy's Attic (03) 749-4897

Decadence (03) 794-7949

Permaculture1 (03) 482-2942

These are just a few of the many BBSs around Melbourne that support .QWK. Andy's Attic and Decadence have a number of Amiga files as well. Now that we have AME, Amiga users are able to use this message system as well. It opens up a world of opportunities for those who like having a chat to people through BBSs. ■



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AMOS RAMBLES

4 Joysticks

by David Fong

ANYONE out there planning to write a four player game in Amos? Well if you are and you think asking someone to connect two Amigas via a null modem cable is a fairly expensive way to make a four joystick adaptor, maybe this article can help!

I heard a rumour somewhere that Amos was going to support four joysticks via the parallel port. This rumour has not yet eventuated (will it ever?), so I was forced to write my

own code. Anyone with a largish reference manual could have found how to do this themselves, but for everyone else...

I have heavily commented this

code partly to cater for beginning programmers, but mainly for the joy of reading my own English...

How is a four joystick adaptor made? See Neil Murray's article in the September 1989 issue of 'WorkBench'. The September 1989 article includes helpful advice, but here is a summary of the pin connections. Joysticks three and four are labelled 'A' and 'B' respectively.

Procedure XJOY[N]

```
'N' is the number of the joystick, either 2 or 3
'I felt this was a logical continuation of the
'standard' joystick numbers - 0 and 1.
A=-1 : Rem a local variable, which is returned
      if this equals -1 when this procedure
      ends, an error has occurred!
      e.g. 'N' equals 0 or 1
PRB=Peek($BFE101) : PRA=Peek($BFD000)
      Rem PRB is from CIA-A
      PRA is from CIA-B
If N=2 : Rem if asking for joystick two
A=15-(PRB and 15)-16*(-1-(Btst(2,PRA)))
      The inverse of the four lower bits
      of PRB, and the inverse of bit 2 of PRA
      What does (-1-'n') where 'n' is Btst(2,PRA)
      mean? Well, if 'n' is equal to -1, (-1-'n')
      will equal zero. Conversely, if 'n' equals zero
      (-1-'n') will equal -1. In other words (-1-'n')
      is equivalent to 'Not(n)', but Amos's 'Not'
      command does not work in this situation!
      Bit 2 of PRA is 'fire' and is placed in
      bit 4 of the return variable 'A'
End If
If N=3 : Rem asking for joystick three
A=15-PRB/16-16*(-1-(Btst(0,PRA)))
      The inverse of the four higher bits
      of PRB, and the inverse of bit 0 of PRA
      '/16' works, and exploits integer arithmetic,
      to move the four higher bits into the four
      lower bits. If available, a 'bit shift'
      instruction may be preferable.
End If
End Proc[A]
```

Peeking PRA and PRB accesses the parallel port. It is advisable to 'reserve' the parallel port before using it e.g.

OPEN PORT 1,"PAR:", followed by a CLOSE 1 at the end of the program.

DB-25 pinlist (parallel port)

2 - A1 i.e. connect pin 2 of parallel port to joystick A's pin 1

3 - A2
4 - A3
5 - A4
6 - B1
7 - B2
8 - B3
9 - B4
11 - B6
13 - A6
14 - A7 and B7 tied together
17 - B8
19 - A8zzzz

My brother's soldering tip - get the wire and the lug very hot with your iron before shoving in the solder (use a fine tip if it helps); don't try the dob-of-solder-on-the-end-of-the-iron method because it will not hold for very long. Melt some plastic if you have to.

I take no more responsibility for this pinout listing than Neil Murray did. Nor does the Amiga Users Group support this project in any way, shape or form.

Mode Name	Size	Colour	Monitor Type	De-interlacer	Notes
Lores	320x200	(A)	NTSC	Scan-doubles	(1)
Lores-Interlaced	320x400	(A)	NTSC	De-interlaces	(1)
Hires	640x200	(B)	NTSC	Scan-doubles	(1)
Hires-Interlaced	640x400	(B)	NTSC	De-interlaces	(1)
Lores	320x256	(A)	PAL	Scan-doubles	(2)
Lores-Interlaced	320x512	(A)	PAL	De-interlaces	(2)
Hires	640x256	(B)	PAL	Scan-doubles	(2)
Hires-Interlaced	640x512	(B)	PAL	De-interlaces	(2)
SuperHires	1280x200	(C)	NTSC	disable it (*)	(3,7)
SuperHires-'lace	1280x400	(C)	NTSC	disable it (*)	(3,7)
SuperHires	1280x256	(C)	PAL	disable it (*)	(3,7)
SuperHires-'lace	1280x512	(C)	PAL	disable it (*)	(3,7)
Productivity	640x480	(C)	VGA	pass-through	(4,7)
Productivity-'lace	640x960	(C)	VGA	pass-through	(4,7)
A2024-10Hz	1008x800	(D)	A2024 (NTSC)	N/A	(5)
A2024-15Hz	1008x800	(D)	A2024 (NTSC)	N/A	(5)
A2024-10Hz	1008x1024	(D)	A2024 (PAL)	N/A	(6)
A2024-15Hz	1008x1024	(D)	A2024 (PAL)	N/A	(6)

Colour:
(A) 2, 4, 8, 16, 32, 64 EHB, or HAM, from a palette of 4096.
(B) 2, 4, 8, or 16 from a palette of 4096.
(C) 2 or 4 from a palette of 64.
(D) 2 or 4 shades of gray.

Enhanced Chip Set Display Modes

by Peter Cherna

Size:

The nominal sizes of each mode are given. The regular NTSC and PAL modes can be overscanned. The SuperHires NTSC and PAL modes can also be overscanned, though less proportionately than the regular NTSC or PAL modes. The two productivity modes can also be overscanned. The A2024 modes can not.

Signal Type:

NTSC: Requires NTSC-type monitor, including 1080, 1084 or television. Some PAL-type monitors also can handle NTSC. Most (?) multiscanning monitors can support NTSC rates.

PAL: Requires PAL-type monitor, including PAL 1080, 1084 or television. Some NTSC-type monitors also can handle PAL. Most (?) multiscanning monitors can support PAL rates.

Peter is a Software Engineer at Commodore-Amiga Inc.

VGA: Requires VGA-class or multiscanning monitor.

A2024 (NTSC): Requires NTSC version of A2024 monitor.

A2024 (PAL): Requires PAL version of A2024 monitor.

De-Interlacer:

The de-interlacer is a circuit on the A3000 motherboard that works with a VGA-class or multiscanning monitor.

When enabled, the de-interlacer provides a VGA-compatible output on its 15-pin connector, from what would be NTSC, PAL or VGA modes from the 23-pin video connector. To use this you require a VGA-class or multiscanning monitor.

De-interlacing means that instead of pushing out two fields in alternation at 60 (NTSC) or 50 (PAL) fields per second (30 or 25 full screens per second), the de-interlacer buffers one field and pushes it out with the other, so that

both fields come out together, for 60 or 50 non-flickering full screens per second.

Scan-doubling means that a single (non-interlaced) field is pushed out twice as fast, and is replicated on adjacent lines. The result is a solid display of color with no visible scan-lines.

(*) The SuperHires modes require that you disable your de-interlacer. If you do, then the output from the 15-pin connector will become NTSC or PAL rate, and will not be scan-doubled or de-interlaced. If you leave the de-interlacer on, you will get a de-interlaced or scan-doubled display, though you will only see every second pixel horizontally, since the display-enhancer is sampling for 640 (plus overscan) pixels per line and not the 1280 pixels that are being generated.

Pass-through means that the de-interlacer detects these modes and passes them through directly to the 15-pin VGA connector.

N/A is because the A2024 plugs in to the 23-pin video connector, and doesn't come near the de-interlacer and its 15-pin connector.

Notes:

(1) Requires NTSC Amiga or any Amiga with Super Agnus.

(2) Requires PAL Amiga or any Amiga with Super Agnus.

(3) Requires Super Agnus and Super Denise, and AmigaOS 2.0.

(4) Requires Super Agnus and Super Denise, and AmigaOS 2.0.

(5) Requires NTSC A2024 (with JumpStart or with AmigaOS 2.0)

(6) Requires PAL A2024 (with JumpStart or with AmigaOS 2.0)

(7) These modes take up twice the bandwidth of a comparable Hires mode, so Super-Hires Interlaced 4 colors is comparable in bandwidth to Hires-Interlaced 16 colors. As well, there is only one sprite available.

Other modes:

For completeness, I should note that there are also some smaller members of the Productivity family that output VGA-class signals, and have resolutions of 320 x 480, 320 x 960 (interlaced), 160 x 480, and 160 x 960 (interlaced). These modes were basically "free" given that we have Productivity mode, but they aren't particularly useful.

THE ART SIG on 15th September did not have many people in attendance. I guess this was because the date for the meeting fell before the AUG meeting. Everyone interested in attending the Art SIG should note that the Art SIG meets on the third Tuesday of every month (so that it does not clash with the SEAUG meetings).

There was one new member at the meeting this month, Alison Leverret. Alison is new to the Amiga and spent quite a bit of time with

Gwen Wood exploring the great things that can be done with Deluxe Paint.

Gwen also showed off some of her new animations. It looks as though the Animation network will have plenty of great material from Gwen for their next tape. Gwen is now generating fantastic animations on Deluxe Paint that include

As it is now 2:00 in the morning, we could not be bothered putting anything intelligent in this previously blank spot!

perspective and people and animals walking, marching and running across the screen or off into the distance.

Geoff Wood had another Video tape about Deluxe Paint (Advanced Techniques), but because of lack of time we were unable to watch it. If it is as good as the Basic Techniques tape it will be worth seeing, Geoff has promised to bring it along to a future meeting for us to see.

Arnie Robbins demonstrated Opal Vision at the SEAUG and

AUG meetings recently. The quality of the 24 bit images are great, but the real advantage with this package is the software that comes with it. Arnie has promised to bring OpalVision to the next Art SIG meeting where we can have a hands on demonstration. I will also bring my scanner along so that we can create some images on the spot. See you there!

The next Art SIG will be held at Aspendale on Tuesday 20th October starting at 7.30 pm. Anyone interested in attending should contact, John Barlow at the next AUG meeting or call on 5514760. ■



APOLOGY

Last months issue of Amiga Workbench was packaged for posting by a different group to the trained volunteers who take on this task with glee each month. As a consequence some members would not have received their newsletter in the mail. Or perhaps may have received more than one copy.

If you did not receive your newsletter last month (September) please let us know by leaving your name and address on the club answering service.

Phone: 527 1995

We did find time later in the evening to look at some of the B & P tools, in particular the various applications of quantizing. In addition having some fun creating arpeggios and glissandos. The intention had been to look further into the mysteries of SuperJam but time ran out. Hopefully this will be on the next agenda.

A reminder again that this SIG is held on the evening immediately following the monthly Holmsglen meeting. The next one will be 7.30 pm on Monday, 19th October at East Brighton, NOT Keysborough. Please note the change of venue, take a diary note now and phone the hosts on 596-3281 if intending to come. Theo & Elvie Koopman are new AUG members and have some interesting MIDI equipment. ■



EIGHT PEOPLE came to the September SIG, a comfortable number for my small area. Two of these were IBM users who had asked to attend and were (?) suitably impressed with the superiority of Amiga. Music is one of the better areas for easily crossing the boundaries between different computer systems because of the universality of MIDI - I often swap files with IBM friends.

Eric Fillisch showed us some of his work with DMCS, scores using multiple tracks for choir use. One member brought a Roland MT32 module which produced some enjoyable music via Bars & Pipes. This unit is a good example of how early market exposure can unduly influence public perceptions; along with IBM it has gained a reputation

as an industry standard. (Both ill deserved in my opinion, but I admit to being biased.) Played from a disk in my Yamaha MDF2 sequencer and simultaneously recorded into Bars & Pipes via MIDI, we enjoyed some incredible piano performances by a certain world-famous artist. As a result, little serious work was done.

HOWDY ALL. On 31 August NWAUG held elections for 1992/93 committee with Simon Shead acting as returning officer.

Simon Shead and Paul Pritsis both decided they needed a break from the hectic committee duties. Good luck with your studies Paul. Others who left early for other endeavours were Co-ordinator and assistant Co-ordinator Kerrie Millar and Tony Prowse.

Election results are as follows.
Co-ordinator - Rohan Safstrom
Ass. Coordinator - Frank Lowe
Meeting Chair - Hugh Leslie
Treasurer/Mem - Gregg Rowbury
General - George Wahr
- Andrew Amor
- Chris Slater
- Leon Wood

I would like to take this opportunity to thank the previous committee members for their

sterling efforts and the time they have put into the club. Also thanks to members for their support and co-operation.



The rest of the meeting was taken up with Gary Gajics' demo of titling using a genlock, DPaintIV and video taken at the meeting. The usual conversing, consumption of tea, coffee, biscuits, use of the PD Software and Book libraries followed. Not to forget Kaotic Concepts who were setup down the back dealing their wares.

The following meeting with the new committee went well. A demo of RayDance, a new raytracing program was seen. This included creating animations and images. These were shown in HAM and HAM-E (HAM-E is a pseudo 24bit display device).

Announcements regarding the release of the Amiga A4000 as well as other new hard/software released by Commodore at a recent show in the States, were made.

ChookLotto was brought back with a new program written to draw the ticket numbers. It certainly is a most comical and entertaining way to draw a raffle and was received quite well (well no one complained too loudly).

Future meeting events to happen (as they happen), can be read from the bulletin area on the BBS. Remember your \$2 for room hire, tea, coffee & biscuits. See you at the meeting.

Frank Lowe ■

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FISH DISK #701

Du

A very small (only 932 bytes) program to display the total disk space used by a directory and all its sub-directories. This is version 2.5, an update to version 1.0 on disk 416. Enhancements include wildcards, totals, clearer output plus the program can be made resident. Requires Kickstart 2.0. Includes source in assembler.
Author: Stuart Mitchell

Examiner

Will question you with files produced by SpellCheck. Smaller than SpellCheck, looks better under AmigaDOS 2.0, and has some extra features. Version 1.0, binary only.
Author: Preben Randhol

GNUPlot

An interactive function and data plotting program which supports a great number of output devices. Includes extensive on-line help. This is version 3.2, an update to version 3.0 on disk 552. Includes source.
Author: Thomas Williams, Colin Kelley, et. al.

SpellCheck

A program which aids you in learning foreign words. You enter the words and their translations, and then the computer quizzes you later. Version 1.3, update to version 1.2 on disk 606. Binary only.
Author: Torgeir Dingsøyr, Pantheon Softworks



Indent

A C source code formatter/indenter. Especially useful for cleaning up inconsistently indented code. Version 1.4, an update to version 1.3 on disk 672. Includes source.
Author: Various, Amiga port by Carsten Steger

PointToPoint

A board game where each player gets to alternately set one of his stones on the board until the last field is occupied. The goal of the game is to enclose as many stones of the opponent as possible. Version 1.1, shareware, binary only.
Author: Manfred Kopp

FISH DISK #703

BootX

An easy to use boot, file and link virus killer. For use with KickStart 2.0 only. Has lots of options to detect and kill Amiga viruses, extensive manual, locale support and AmigaGuide online help. This is version 5.00, an update to version 4.45 on disk 641. Binary only.
Author: Peter Stuer

HunkX

A utility to examine the hunk structure of executables, static libraries, dynamic libraries or object files. Supports all AmigaDOS 2.0 hunks. For use with KickStart 2.0 only. This is version 2.00, binary only.
Author: Peter Stuer

LVD

A first defense utility against file and link viruses. It patches the LoadSeg vector(s) and checks every executable that comes along. Recognizes 33 file or so link viruses. Version 1.73, an update to version 1.72 on disk 641. Binary only.
Author: Peter Stuer

MAssign

A little command to make 'M'ultiple assigns. Allows you to remove all

assign and makedir statements from your startup-sequence. For use with KickStart 2.0 only. Version 2.00, binary only.
Author: Peter Stuer

MPE

A compiler tool for users of the M2amiga programming environment. MPE does the same job better than your batch file. You can do everything with the mouse or the right amiga key. With this Modula-2 Programming Environment you can compile, link, and run your program. When there is an error, the editor is started automatically. You can set all switches for M2C, M2L and M2Make. This is version 1.17, an update to version 1.0 on disk 671. Binary only.
Author: Marcel Timmermans

FISH DISK #704

Flex

A replacement for the UNIX "lex" (lexical analyzer generator) program that is faster than lex, and freely redistributable. Lexical analyzer generators are generally used in combination with parser generators (such as yacc or bison), to generate frontends for language compilers and other tools. Version 2.3.7, an update to version 2.3 on disk 407. Includes source.
Author: Jef Poskanzer, Vern Paxson, et. al.

GrabIFF

Lets you grab any screen, window, portions of a screen or a mousepointer-image as an IFF-ILBM-file, which can be used by nearly any paint program on the Amiga. Gives you lots of useful options. Implemented as a commodity. Version 1.00. Includes documentation in german and english language.
Author: Hartmut Stein / Bernstein Zirkel Softworks

PowerPlayer

A very powerful, user friendly and system friendly module player. It can handle nearly all module-formats, can read powerpacked modules, and comes along with its own cruncher that uses the lh.library written by

Krekel/Barthel. Has a simple to use user interface and an AREXX port. Needs the powerpacker.library and the reqtools.library to run, both included in the package. This is version 3.0, an update to version 2.7 on disk 687. Freeware, binary only.
Author: Stephan Fuhrmann

SFCoder

A program that allows you to encrypt and decrypt files by using a password. Uses complex routines to assure the security of your data. Requires OS 2.0 to run. Version 3.2, an update to version 3.0 on disk 687. Freeware, binary only.
Author: Stephan Fuhrmann

SPClock

A clock that uses sprites to display the time. This allows the clock to remain visible no matter what screen is being displayed and no matter where you scroll on a Workbench 2.0 auto-scrolling screen. Version 2.1, includes source.
Author: Mark Waggoner

SunClock

Displays a map of the world showing the portion that is presently illuminated by the sun. Version 1.0, ported from X11 and Suntools versions. Includes source.
Author: Mark Waggoner, John Mackin, John Walker

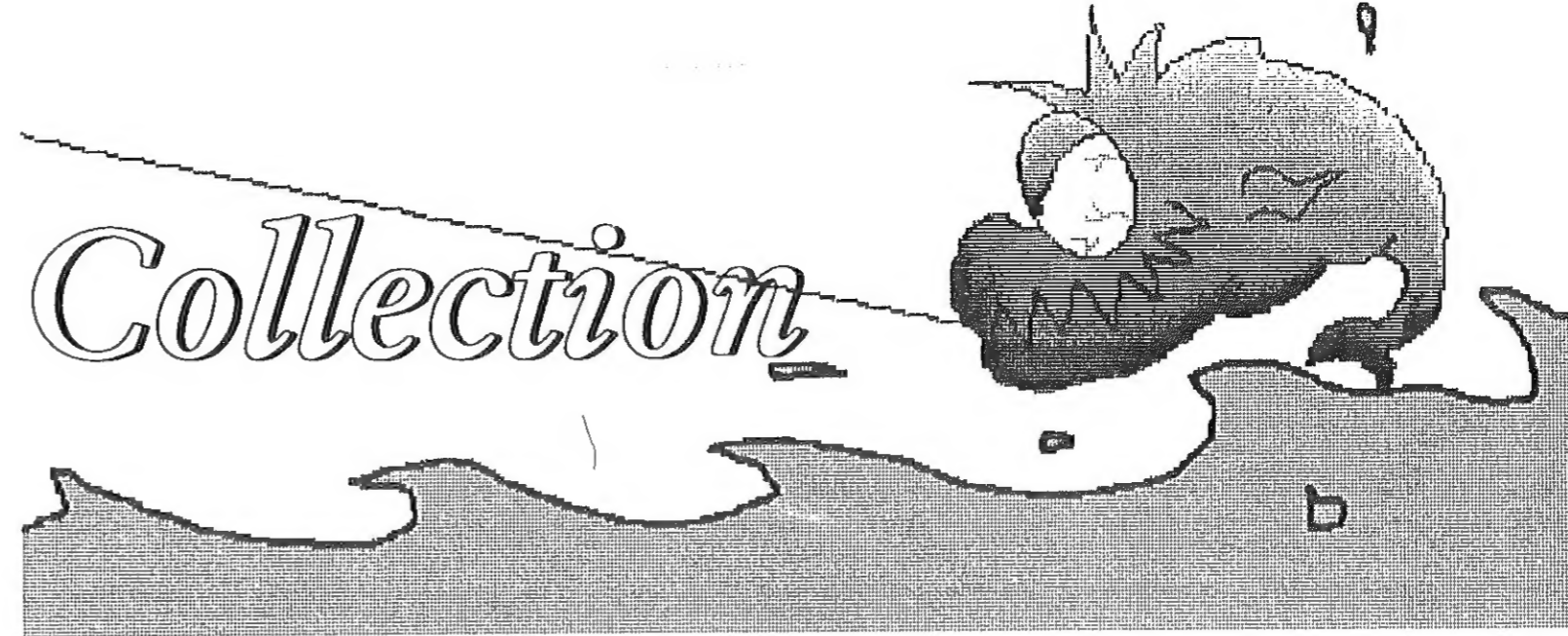
FISH DISK #705

CrossMaze

A crossword puzzle game where the player is given the words but no clues. The object is to find a way to place all the words back into the puzzle. Options include 10, 20, or 30 word games with one or two players. Version 1.0a, an update to version 1.0 on disk 694. Binary only.
Author: James Butts

FishCat

A program designed to allow searching the entire library. Was written specifically for KS 2.0. Features very fast searches and the built-in ability to easily add new disks to the database. Supports many 2.0 features such as AppWindow and public screens. Iconifies. This is version 1.2, an update to version 1.1 on disk 607.



Adds a simple AREXX port, printing, compact update files, and fixes all known bugs.
Author: Matt Brown

MFR

Magic File Requester is a replacement for other file requesters. Features include complete keyboard control, nice outfit, proportional font support, multiple directory caching, file find mechanism, file class support, file notification, many configuration options, history list, etc. This is version 2.0a, shareware, binary only.
Author: Stefan Stuntz

NewIFF

New IFF code modules and examples for use with the Release 2 iffparselibrary. This code release is again 1.3 compatible (the 37.8 release was not). This code is intended to replace the 1985 EA IFF code modules, providing significant enhancements including support for arbitrary display modes and overscan (2.0), clipboard load/save, centralized string handling (for ease of localization), and simplified subroutines for displaying, saving, and printing ILBMs. And the 8SVX reader now plays! This is version 37.10, an update to version 37.9 on disk 674.
Author: Submitted by Carolyn Scheppner

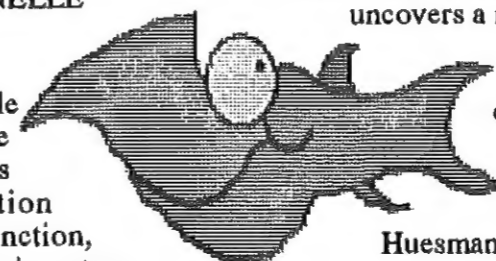
FISH DISK #706

ABackup

A new backup utility for the Amiga. May be used both for hard disk backup and for file archiving. Has a full Intuition interface, can save/load file selections, handles HD disks, etc. Includes both French and English versions. This is version 1.31, shareware, binary only.
Author: Denis GOUNELLE

APrf

A freely redistributable printing utility for the Amiga. Features include a full Intuition interface, preview function, page selection, margin setup, line numbering, an AREXX port, a multi-columns mode, 2.04 system release support and more. Includes both French and English versions. This is version 1.30, an update to version 5.00 on disk 628. Binary only.
Author: Denis GOUNELLE



AUSH

A new command line interpreter, designed to replace the CBM shell. Features include file name completion, pattern expansion, expression computation, command history, for...done loops, and much more. Almost fully compatible with ARP or Commodore shells. This is version 1.42, with full support of AmigaDOS 2.04, a heavily modified parser, "pure" code, a few Enforcer/Mungwall hits removed, and other bug fixes and enhancements. Requires "arp.library" under 1.3. Binary only.
Author: Denis GOUNELLE

PatchOS

Enhances OS 2.04 with three new features: keyboard-shortcuts for menus while a string-gadget is active, use of the star (*) in AmigaDOS pattern matching and input of any char by typing its ASCII-code on the numeric pad. Requires at least AmigaOS 2.04. Implemented as a commodity. Version 1.00. Includes documentation in german and english language.
Author: Hartmut Stein / Bernstein Zirkel Softworks

WalkingMan

A small screen hack that makes a variable number funny men appear on the Workbench Screen and CustomScreens. They move depending on the graphics shown and changing graphics will be noticed by them. Includes source.
Author: Jan P. Katz

FISH DISK #707

AMines

A small game, like the X-Window's game XMiner. The aim of the game is to detect all of the 99 mines in a 30 by 16 playing field. Selecting a field uncovers a number that indicates how many of the adjacent fields contain mines. This is version 1.1, binary only.
Author: Manfred Huesmann

Aniso

A small puzzle game for your Workbench screen, similar to the "Brain game". Played in a small window containing two 3 by 3 grids. One grid is already filled with numbers between one and four, and the other is empty.

The goal is to form an image of the first grid by clicking on squares in the empty grid. Includes source.
Author: Barry McConnell

MungWall

Munges memory and watches for illegal FreeMem's. Especially useful in combination with Enforcer. Output can go to either the serial or parallel port. Includes a new MungList program that examines used memory areas for MungWall tag info, and outputs a list of who owns the various pieces of allocated memory, their sizes, etc. Can even identify the owner of the memory by task name. This is version 37.54, an update to version 37.52 on disk 699. Binary only.
Author: Commodore Amiga; submitted by Carolyn Scheppner

RayShade

Rayshade is a ray tracing program ported to the Amiga from UNIX. Rayshade's features include eleven types of primitives, composite objects; several types of light sources, texturing, bump mapping, antialiasing, linear transformations, rendering of stereo pairs, rudimentary animation support, and more. Includes some example input files, original sources in C, and diffs for the Amiga. Version 4.0PL6, Amiga Release 0.5, an update to version 4.0PL6 Amiga Release 0.4 on disk 679.
Author: Craig Kolb, Rod Bogart, Martin Hohl, et. al.

FISH DISK #708

HardBlocks

A shared library with support routines for Commodore's hard block standard, and a small tool which demonstrates use of the library. Version 1.2, an update to version 1.1 on disk 653. Includes source.
Author: Torsten Jürgeleit

Icons

Some WorkBench 1.3 icons with a WorkBench 2.0 3D look. They also look pretty good under 2.0 when simply run through one of the many icon remapping tools available.
Author: L. Guzman

Intuisup

A shared library with support routines for using texts, menus, borders, gadgets, requesters, and more, under AmigaDOS 1.3. Includes a template editor and source to library and test programs. This is version 4.2, an update to version 4.0 on disk 654.
Author: Torsten Jürgeleit

SmartED

Demonstration release of a DX7 voice editor, librarian, bulk storage utility. When you run the Smart-ED demo you have one voice. Load, Save, and Receive voice have been disabled. This is version 1.0, binary only.
Author: William Adjei

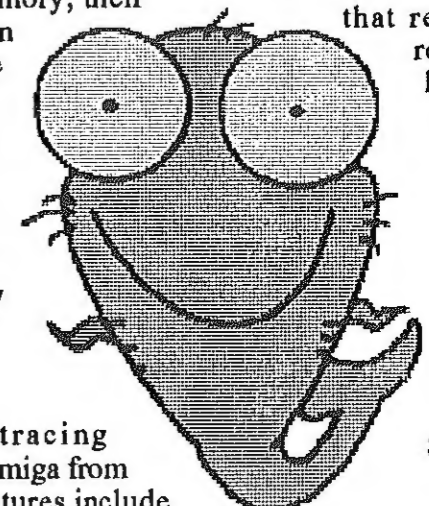
VoiceBoy

A small WorkBench utility which allows you to use DX7 voice libraries produced by both Smart-ED DX7 and Music-X. Also contains a voice library drawer with a total of 64 voices for you to try out. This is version 1.1, binary only.
Author: William Adjei

FISH DISK #709

CPUClr

A small hack, inspired by CPUBlit, that replaces the BitClear routine of the graphics library with a highly optimized 68020 (or higher) routine. This results in about a 60% speed up on a 68020 and should be even more on a 68030/68040. This is version 2.000, includes source.
Author: Peter Simons



LittleBoulder

A "Pick'n Run" Action-game, which contains eight different levels to be completed within a certain time limit. This is version 1.0, binary only.
Author: Carsten Magerkurth

Planets

A pair of programs to calculate the positions of the planets and the moon (as viewed from a specific point on the earth), for an arbitrary date and time. This is version 1.1, an update to version 1.0 on disk 321. Includes source.
Author: Keith Brandt et al.

ThinkAMania

A "Concentration" like board game. It features excellent hires graphics, funny sound effects and enormous fun for up to two players regardless of age and education. This shareware version is 100% functional, but does include a requester that pops up from time to time to remind you of the shareware fee. All options are available and the complete set of stones is integrated. Version 2.9, an update to version 2.1 on disk 541. Binary only.
Author: Thomas Schwoeppe, Dirk Respondek

The new masthead for these pages was designed by one of our most prolific contributing artists, Nathan Mitchell. So were the fish. We value highly the contributions from Nathan and our other regular artists, but we're always on the lookout for new talent. Why not send us some of YOUR fish pictures for use in future issues?

More Fish.....

FISH DISK #710

AntiCicloVir

A link virus detector that detects 25 different such viruses. Version 1.5, an update to version 1.3 on disk 664. Shareware, binary only. Author: Matthias Gutt

bBaseII

A simple database program using an intuition interface. Stores, sorts and searches for information. Limited to 9 fields in each record. Features include fast sorting, search in any field, mailing label support, and best of all, it's really easy to use. This is version 5.5, an update to version 5.32 on disk 652. Enhancements include a 270% increase in storage capacity, range search, and add or delete a field. Binary only. Author: Robert Bromley

CryptoKing

A game for those who like to solve Cryptograms, (those coded sentences that have to be decoded to be read). Operate with keyboard or mouse. This is Version 1.1, an update to Version 1.0 on disk 609. Shareware, binary only. Author: Robert Bromley

TypoGrapherFix

A patch for the TypoGrapher v2.05 font editor on disk 697. It fixes a bug which kept the program from running on KickStart 1.3 machines. Author: Dietmar Eilert

FISH DISK #711

MouseAideDEMO

A demo version of a "Mouse utility" with all the standard functions; mouse acceleration with threshold, window and screen manipulation by mouse and keyboard, mouse and screen blanking, SUN (auto-activation) mouse, user definable "hotkey" command, keyboard "string" macros, etc. Also has functions other mouse programs do not, such as multi-icon-select with only the mouse, left and right button swapping, mouseport switching, WorkBench to the front function, freeing of the mouse and keyboard of all input, etc. Written in assembly language for efficiency in size and CPU usage. Version 5.02a, an update to version 4.23a on disk 646. Shareware, binary only. Author: Thomas J. Czarnecki

Solitaire

A shareware solitaire game of klondike solitaire. The rules can be varied, and there are five different ways of working through the deck. Also includes an undo function that will unmove more than the last move, a wrapup function for when a game is all but won, a palette requester to fine tune the colours to your liking and a save-setup function that remembers how all the options are set. This is version 1.9, an update to version 1.8 on disk 511. Shareware, binary only. Author: Gaylan Wallis

TheWeb

A graphic-diagram based, interactive environment for data acquisition and processing. This is a freely distributable demonstration edition that has a restricted set of modules, and cannot save things to disk, but is otherwise fully featured. The concept is of data packets travelling along paths between data handling elements. Configurations are built by placing and connecting the desired elements on screen using the mouse. Needs the 2.04 or later operating system and at least 1MB of memory. Version 1.1, binary only. Author: Pete Goodeve and David Navas

Windowtool

Windowtool is a program that allows you to switch between windows, to close them and to change their size. You can also open a new shell and stop multitasking. The program is a standard commodity and can be controlled by the workbench exchange program. Version 1.0, includes source. Author: Klaas Hermanns

FISH DISK #712

AniMan

AniMan combines Amiga animation, speech synthesis, and voice recognition, to provide you with an animated talking head that will run any Amiga program by voice command. Ask for an Amiga program by name, and AniMan will oblige. If AniMan becomes impatient, you may be insulted. AniMan will also recite poetry if you ask nicely. This is Version 3.0 of AniMan, an update to version 2.1 disk 653. It corrects a bug that caused AniMan to crash on some machines but not others. This version will also automatically adjust for either NTSC or PAL systems. Either the Perfect Sound 3 or Sound Master (Sound Magic) audio digitizer is required along with 1MB of fast memory. AniMan is like nothing you've ever see before. Binary only. Author: Richard Horne

HamLabDemo

Demo version of an expandable image format conversion utility that converts GIF, IFF, JPEG, Targa, BMP, TIFF, PBMPPLUS, MTV, Spectrum 512, QRT, and Sun images into IFF (normal, HAM, halfbrite, and "sliced" variations of each). Images can be scaled, dithered, color corrected, and cropped. This demo version is limited to processing images of 512 by 512 pixels or less. This is version 2.0.6, an update to version 1.1 on disk 466. Shareware, binary only. Author: J. Edward Hanway

Eyes

Amiga version of XEyes, a program which opens a window on the WorkBench screen containing eyes, which follow the cursor about the

screen. Version 3.0, binary only. Author: John D. Gerlach Jr.

Solitaire

An amiga version of klondike solitaire. Provides multiple options including six different decks, customizable game rules, game timer, the ability to view a stack, and an undo feature. Binary only. Author: David Meny and Albert Penello

FISH DISK #713

Free

Display how much free space (bytes or blocks) you have on any or all of your mounted disk volumes. Runs from CLI only. This is version 1.06, an update to version 1.01 on disk 388. Free now searches your device list if desired (under AmigaOS 2.0+ only), and several minor bugs have been fixed. Includes source. Author: Daniel J. Barrett

ICalc

A powerful calculator with many features, including userdefined variables and functions, C-style programming constructs, complex number calculations and more. Has comprehensive instructions, and numerous examples. This is version 2.1a, an update to version 2.0 on disk 695. Enhancements include flexible number-base control and scripts to perform numerical integration. Binary only, source available from author. Author: Martin W. Scott

JoinSounds

A utility to join 8SVX sound files. Graphical interface allows samples to be previewed, and start/stop points to be set. This program will join both stereo and mono sound files in any combination. Uses buffered disk I/O, allowing samples larger than available memory to be joined. This is version 2, binary only. Author: Joe Tatman and Brian Roy

LongPlay

An 8SVX IFF sound file player. Reads samples directly from disk while playing, allowing unlimited length samples. Runs as a background task and multi-tasks well. Can also be used as the default tool of a project icon. Binary only. Author: Joe Tatman

MathsAdv

A simple game where you, the young adventurer, must try to escape the king's Maths Adventure. To do this you must pass through a series of rooms. In each room you are given a math problem to solve, after which you can proceed to the next room if you answer correctly. The problems become more involved and more difficult in each room. This is an update to the version on disk 602. Includes source. Author: Jason Lowe

ReflexTest

A game which tests your addition, subtraction, or multiplication skills. The goal is to answer forty math questions in the shortest possible time. Binary only. Author: Jason Lowe

FISH DISK #714

CoGo

An engineering/surveying program to solve coordinate geometry problems for highway design, surveying, subdivision layouts and constuction. Needs 1 Mb of memory. CLI only with output to screen or printer. Manual, with sample problems, available from author. This is version 1.0, binary only. Author: Don R. Benson

JoeyDemo

A demo version of a Sokoban type game where your task is to push Grullies (the only food of the Joey) to the stock, which is designated with little rhombic symbols on the floor. To complicate things there are iceblocks and teleporters. The demo version contains 5 levels while the registered version contains 60 levels. Shareware, binary only. Author: Richard Ziegler, Roland Schreiner

XStat

A UUCP utility that computes several statistics from the Xfer-Stat file (similar to UUTraf). Offers lots of options. Requires Andrew "Charly" Kopp's uucico V1.15c or later, and also Kickstart 2.04 (V37.x) or later. Version 1.07, freeware, includes source in Modula-2. Author: Jürgen Weinelt

FISH DISK #715

Intuisup

A shared library with support routines for using texts, menus, borders, gadgets, requesters, and more, under AmigaDOS 1.3. Includes a template editor and source to library and test programs. This is version 4.4, an update to version 4.2 on disk 708. Author: Torsten Jürgeleit

LhA

A very fast archiver that is compatible with MS-DOS LhArc V1.13 and LhA V2.13, as well as the Amiga LhArc. LhA is very memory efficient, has been written with stability and reliability in mind, has carefully optimized compression and decompression routines, is multitasking reentrant and pure, handles multiple volume archives (registered version only), and more. Version 1.32, an update to version 1.22 on disk 637. Shareware, binary only. Author: Stefan Boberg

FISH DISK #716

BCount

A utility to count files, directories, hardlinks, and softlinks for a given root directory. Requires Amiga OS 2.04. This is version 1.12, binary only. Author: Norbert Bazin

ReOrg

ReOrg is a fast disk optimizer that can be used for floppy disks and hard disks. Supports new Kickstart 2.04 features including hard and soft links and High-Density drives. Includes program versions in English and German for use with Kickstart 2.04 only. This is

version 2.31, an update to version 2.3 on disk 699. Shareware, binary only. Author: Holger Kruse

TalinCode

A bunch of source code for demos, tests, and experiments, that the author wrote over a period of 8 years, mostly for recreation or for general R&D for projects that never materialized. Includes 3D techniques, a maze generator, logarithms, basic utility functions, DOS functions, random numbers, and much more. Includes source, mostly in assembly code. Author: David Joiner

Wasp

A picture format converter. Input formats supported include GIF (87a), IFF (Iores, hires, HAM, EHB, 24-bit, sliced, dynamic, etc), SRGR, Sun rasterfile, PPM (P5 and P6), HL2, and MTV. Output formats supported include IFF, SRGR, and PPM. Version 2.02beta. Includes source. Author: Steven Reiz

ZMachine

A program which can interpret Zork Implementation Language (ZIL) data files. ZIL is the language used by the interactive fiction series of games from Infocom Inc. Version 1.0.3, binary only. Author: leo@marco.UUCP, Amiga port by Kent Dalton

FISH DISK #717

ADev11

A complete development system for Motorola's 68HC11 processor, including a macro assembler, linker, librarian, downloader and disassembler. Supports multiple source file and multiple relocatable segments per file. Binary only. Author: Stan Burton

ALock

A limited multiuser security system for your Amiga. This is version 1.04, binary only. Author: Trevor Andrews

FileStat

Facilitates the editing of all information about a file, such as protection bits, name, comment, etc., using a graphical interface. Version 2.0, binary only. Author: Robert Lang

PacMan

A pacman type game with 20 levels, 5 bonus levels, and extra tools. Automatically adjusts to either PAL or NTSC. Can be controlled with a joystick, mouse, or keyboard. Written in assembly. Version 1.1A, shareware, binary only. Author: Edgar M. Vigdal

SpaceII

A hot-key program with over 50 functions including four screen blankers, screen shuffler, path/filename transmitter, textreader, virus checker, boot block display, calculator, disk copier and/or formatter, palette selector, screen dumper, etc. Version 2.3 beta, binary only. Author: Edgar M. Vigdal

ViewIcon

Simple program to view icons from the shell. Opens up a sufficiently sized window so that the icon can be displayed in it. If you click the icon, it has the same effect as clicking it on the workbench, so you can see the icon's alternate image. Version 1.0, binary only. Author: Robert Lang

FISH DISK #718

BootPic

BootPic allows you to install nearly any IFF picture that you like in place of the WorkBench hand that appears after a reset, and additionally plays a MED-Module. Version 2.1b, an update to version 2.0 on disk 635. Includes source in assembly. Author: Andreas Ackermann

Less

A port of a UNIX text file reader. It can use pipes, accepts multiple

filenames, and has many convenient positioning commands for forward and backward movement, marking positions, etc. This is version 177.4 an update to version 1.4Z on disk 511. Includes source. Author: Mark Nudelman, port by Frank Busalacchi

Settime

Set the system time from the internal hardware clock. Written to be very small and fast. Also includes versions that can be installed as boot blocks. Version 0.9, includes source in assembly. Author: Andreas Ackermann

SmallMath

"Drop-in" replacements for the Commodore IEEE math libraries for users with a math coprocessor. Since these libraries do not contain the coprocessor-emulation code normally present, they are 60%-90% smaller than the usual libraries. For the same reason, however, they cannot be used without a coprocessor. Version 1.1, public domain, partial source included. Author: Laz Marhenke

FISH DISK #719

CrcLists

Complete CRC check files for disks 521-710 using the brik program. These were made directly from my master disks. Along with the CRC lists from previous disks, these lists will allow you to check all of the disks in the library to make sure they are correct and complete. Author: Fred Fish

DefTool

Programs that allow you to easily change the default tool of one or more project icons, from either the CLI or from WorkBench. The WorkBench version is a commodity. Binary only. Author: Robert Lang

DrawMap

A program for drawing representations of the Earth's surface. New features include seven new types of map

projections, user specifiable point to be at the center of the maps, and box views that can now cross the international date line. Also includes accelerated version requiring a 68020 CPU and 68881 FPU, and versions for PAL systems. Requires 1.5 Mb of memory and a hard disk with 1.6 Mb of free space. Distributed in two parts, the other part is on disk 720. Both parts are required. This is version 4.1, an update to version 4.0 on disks 639 and 640. Includes full source. Author: Bryan Brown.

FixIcon

Fixes some icons that show bad markings when run on greater than 4 color Workbenches. Doesn't fix them all, but fixes a common problem. Includes source in C. Author: Robert Lang

MakeIcon

Allows you to create any of the Workbench 2.0 default icons for anything, disks, projects, drawers, the works. Designed for people who work from the shell making disks that will ultimately run from the Workbench. Requires Workbench 2.0. Binary only. Author: Robert Lang

FISH DISK #720

DrawMap

A program for drawing representations of the Earth's surface. New features include seven new types of map projections, user specifiable point to be at the center of the maps, and box views that can now cross the international date line. Also includes accelerated version requiring a 68020 CPU and 68881 FPU, and versions for PAL systems. Requires 1.5 Mb of memory and a hard disk with 1.6 Mb of free space. Distributed in two parts, the other part is on disk 719. Both parts are required. This is version 4.1, an update to version 4.0 on disks 639 and 640. Includes full source. Author: Bryan Brown.

PUBLIC DOMAIN SOFTWARE ORDER FORM

Mail to: Amiga Users Group, PO Box 684E, Melbourne 3001, Victoria

Disk Numbers																								
Dont forget to specify collection name i.e., FISH, AMIGAN, AMICUS etc.																								
Disks supplied by the Amiga Users Group @ \$4 each															\$									
Disks supplied by member @ \$2 each															\$									
Club Use Only:															Total:					\$				
Member's Name:															Membership #									
Address:																								
Postcode:																								

AMIGA Calendar

Sunday	Oct 18	Holmesglen Meeting
Monday	Oct 19	Music SIG Meeting
Tuesday	Oct 20	Art SIG Meeting
Monday	Oct 26	NWAUG Meeting
Tuesday	Oct 27	SEAUG Meeting
Monday	Nov 9	NWAUG Meeting
Tuesday	Nov 10	SEAUG Meeting
Tuesday	Nov 17	Art SIG Meeting
Sunday	Nov 22	Holmesglen Meeting
Monday	Nov 23	NWAUG Meeting
Monday	Nov 23	Music SIG Meeting
Tuesday	Nov 24	SEAUG Meeting

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Monday	Nov 23	NWAUG Meeting
Monday	Nov 23	Music SIG Meeting
Tuesday	Nov 24	SEAUG Meeting

North West AUG meetings are held every second Monday from 7.30 p.m. The meeting room is on the first floor of the Essendon Community Centre, on the corner of Mt. Alexander road and Pascoe Vale Road, Essendon (Melways Map 28 reference J7).

Art SIG meetings are held on the 3rd Tuesday of each month (N.B. this is NOT always the Tuesday following the Holmesglen meeting!! The venue may vary, so check the Art SIG report in this issue for the location of the next meeting.

If you are arranging (or know of any) forthcoming meetings, demonstrations, lectures or other events that would interest readers, please let us have the details so that we can publicise them here. Country members unable to attend Metropolitan meetings are encouraged to use this calendar for local events.

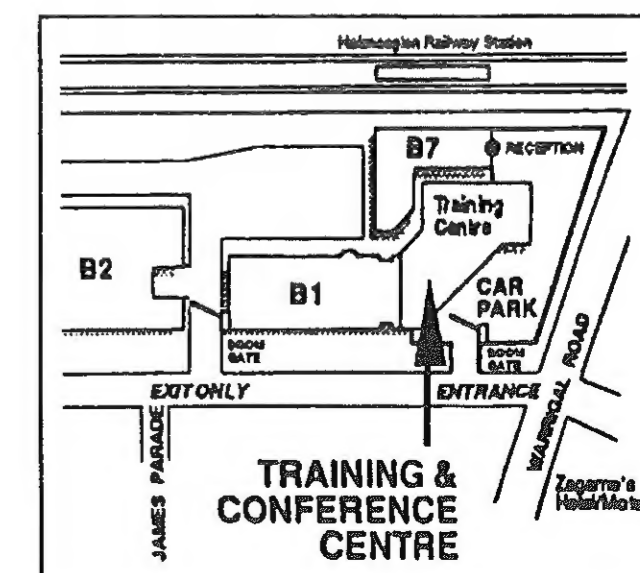
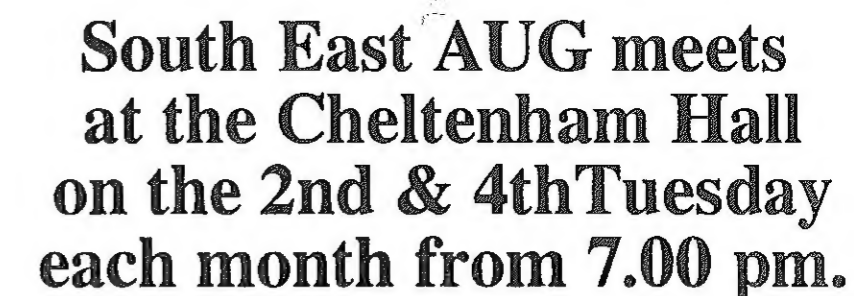
WARNING!
It has been brought to our attention that the Grey Ghosts are indeed active on Sundays. Please ensure that you are parked legally during the Holmesglen meetings or you may receive a parking ticket!

While the standard of articles we receive is usually very high, they seem to be very thin on the ground and we are sometimes left wondering whether we are going to be able to fill the next issue.

Sadly, this is not the case and consequently your editorial committee spends a lot of time searching for material.

Have you found a workaround for one of the limitations of your favourite program? Or do you have some tips for producing interesting effects in DeluxePaint or OPalVision?

Perhaps you are a closet fiction writer and have been hiding a brilliant short story about Ada, Countess Lovelace and her experiences as a programmer for Charles Babbage. Why not come out of the closet and see your prose made immortal in the pages of Amiga Workbench?



AMIGA *Workbench*

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